

## CLAIMS

What is claimed is:

1. A method for detecting which one of a plurality of mobile RF terminals located on a corresponding plurality of mobile platforms, and communicating with a transponded target satellite, is causing interference with a non-target satellite orbiting in a vicinity of said target satellite, the method comprising the steps of:

a) using a base station component to receive a message indicating that interference with said non-target satellite is occurring;

b) using the base station component to command a first one of a plurality of mobile terminals in communication with said base station component to modulate its transmit signal between one of a plurality of data rates or power values assigned by the base station;

c) using said base station to check with said operator of said non-target satellite to determine if a change in said degree of interference was detected by said operator; and

d) if a degree of change is detected by said operator, then determining that said first one of said mobile terminals is causing said interference.

2. The method of Claim 1, further comprising the step:

if steps b) and c) reveal that said first one of said mobile terminals is not the cause of said interference, then using said ground-based component to repeat steps b) and c) to sequentially check each said mobile terminal accessing said target satellite until it is determined which one of said mobile terminals is causing said interference.

3. The method of Claim 1, wherein step a) comprises using a ground-based, base station component.

4. The method of Claim 1, wherein said predetermined signal parameters comprises a plurality of different data transmission rates.

5. The method of Claim 1, wherein said predetermined signal parameters comprises a plurality of different data transmission rates between about 16kbps to about 160kbps.

6. A method for detecting which one of a plurality of mobile RF terminals located on a corresponding plurality of mobile platforms, and communicating with a transponded target satellite, is causing interference with a non-target satellite orbiting in a vicinity of said target satellite, the method comprising the steps of:

a) using a base station to receive a message indicating that interference with said non-target satellite is occurring;

b) using the base station to command a first one of a plurality of mobile terminals in communication with said base station to modulate its transmit signal between data rates assigned by the base station, to thereby modify the power level of said modulated transmit signal;

c) checking with an operator of said non-target satellite to determine if a change in a degree of interference, relative to said non-target satellite, was detected by said operator when said first one of said mobile terminals changed its data rate; and

d) if no change in said degree of interference is detected, then performing steps b) and c) repeatedly to test each of said mobile terminals until it is determined which one of said mobile terminals produces a change in interference detected by said operator of said non-target satellite.

7. The method of Claim 6, further comprising the step of using said base station to communicate a command to said first one of said mobile terminals to reduce its transmit power level.

8. The method of Claim 6, wherein step b) comprises commanding said first one of said mobile terminal to modulate its said transmit signal between data rates within a range of about 16kbps and 160kbps.

9. The method of Claim 6, wherein each said mobile terminal is determined to not be causing said interference before checking a different one of said plurality of mobile terminals.

10. The method of Claim 6, wherein step a) comprises using a ground-based base station.

11. A method for detecting which one of a plurality of mobile RF terminals located on a corresponding plurality of mobile platforms, and communicating with a transponded target satellite, is causing interference with a non-target satellite orbiting in the vicinity of said target satellite, the method comprising the steps of:

- a) using a ground station having a network operations center (NOC) to receive a message from an operator of said non-target satellite indicating that interference with said non-target satellite is occurring;
- b) using the NOC to command a first one of a plurality of mobile terminals to modulate its transmit signal between data rates assigned by the NOC;
- c) using said NOC to check with said operator to determine if said interference condition has changed;
- d) if said interference condition has changed, then determining that said first one of said mobile terminals is causing said interference condition; and
- e) if said interference has not changed, then repeating steps b) and c) for a subsequent one of said mobile terminals until that said mobile terminal is identified that causes a change in said interference condition.

12. The method of Claim 11, wherein step b) comprises using said NOC to command each said mobile terminal to modulate its said transmit signal between a data rate of about 16kbps and about 160kbps.

13. The method of Claim 11, wherein one of said plurality of mobile terminals is checked by said NOC and verified not to be causing said interference before checking a different one of said plurality of mobile terminals.

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